



The Board's Bulletin

A Quarterly Publication for Licensees of the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors

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The 2007-2008 State Board of Licensure for Professional Engineers and Land Surveyors

Pictured Back Row, Left to Right:

Glen W. Smith, P.E., P.L.S.; Ted Sack, P.L.S.; Mark A. Fuller, Public Member

Pictured Front Row, Left to Right:

George T. Gibson, P.E.; Robert C. Zahl, P.E.; Bill A. McVey, P.E. (Board Chair); Roy W. Entz, P.E., P.L.S.

COMPLIANCE GUIDELINES FOR FOUNDATION REPAIR COMPANIES

In order to protect the health, safety, welfare and property of the citizens of the state of Oklahoma, the Board recently adopted the following guidelines to be used by foundation repair companies and structural engineers in the state of Oklahoma. Anyone violating these guidelines may be in violation of Title 59, 475.1 et seq and OAC 245:15

- I. Customer contacts one of the following regarding a foundation problem:
 - A. A foundation repair company which is not an authorized firm with this board, or
 - B. A foundation repair company which is an authorized firm with this Board that employs a full-time professional engineer, or
 - C. A structural engineer who is not an employee of a foundation repair company; or a structural engineering company, which assigns the project to a PE within the firm.
 - A. When (I-A.) is applicable, the foundation company would then contact a PE or an authorized structural engineering company that employs a full-time PE, who is assigned the project.
 - B. When (I-B.) is applicable, the foundation company assigns the project to a PE who is in responsible charge of engineering in Oklahoma for the firm.
 - C. When (I-C) is applicable, go to III.
- III. A. When (I-A) is applicable, PE directs a technician (employed either by the PE or the foundation repair company) to go to the site to gather information per the PE's instructions **OR** the PE goes to the site to gather information.
 - B. When (I-B) or (I-C) are applicable PE directs a technician working under their responsible charge to go to the site to gather information per the PE's instructions **OR** the PE goes to the site to gather information.
- IV. When (I-A), (I-B), or (I-C) are applicable PE reviews information and determines:
 - A. Additional information is required and directs technician to obtain information, or additional information is required that will require the PE to visit the site. PE then determines either (B) or (C) below. **OR**
 - B. PE determines that sufficient information has been obtained and develops the repair plan which is signed, sealed, and dated per the Board's statutes and rules, including the firm or individual's contact information included on the plan. **OR**
 - C. PE determines that sufficient information has been obtained and that **NO REPAIR** is necessary or a repair other than piers is necessary. PE may

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Board Meeting Dates 2008

January 24-25
March 6-7
May 22-23
July 17-18
September 45
November 6-7

Exam Dates & Cut-off Dates for submitting applications

Application forms are on our website www.pels.state.ok.us

Jan. 3, 2008 - cut-off date for accepting P.E. & L.S. applications for the April 11, 2008 exams

AND the cut-off date for E.I. & L.S.I. applications for non full-time students for the April 12, 2008 exams.

February 5, 2008 - cut-off date for accepting E.I. & L.S.I. applications for full-time students for the April 12, 2008 exams

June 1, 2008 - cut-off date for accepting P.E. & L.S. applications for the October 24, 2008 exams

AND the cut-off date for E.I. & L.S.I. applications for non full-time students for the October 25, 2008 exams.

Sept. 5, 2008 - cut-off date for accepting E.I. & L.S.I. applications for full-time students for the October 25, 2008 exams.

*In Celebration of the Lives &
Contributions of the Following
Professionals:*

*David A. Caudill PE 16081
Kansas City, MO 4/24/07*

*Paul E. Clowers PE 2246
Oklahoma City, OK 8/28/07*

*Eddie Jay Dillard PE 16167
Mustang, OK 10/23/07*

*Douglas R. Flack PE 15422
Casper, WY 12/2007*

*Cranston W. Flesher PE 4034
Edmond, OK 9/28/07*

*Jimmie D. Flowers LS 1170
Round Rock, TX 7/2007*

*Lewis K. Harris PE 9586
Tulsa, OK 11/2007*

*Kenneth E. Klaffke PE 853
Oklahoma City, OK 9/2007*

*John A. Lattin PE 13396
Kalamazoo, MI 11/2007*

*Tom Morris PE 15665
Oklahoma City, OK 9/19/07*

*Jerry D. Stachiw PE 5191
Canyon Lake, TX 4/25/07*

*B.J. Washburn LS 808/PE 5501
Ardmore, OK 09/2007*

*Max R. Prewitt PE 8189
Oklahoma City, OK 9/11/07*

*Patrick J. Yonikas PE 15125
Oklahoma City, OK 3/3/06*

PE Continuing Education Audit Conducted

By: George Gibson, P.E.,
Chair of PE Cont. Ed. Committee

The professional development hours for Professional Engineers and Professional Land Surveyors is audited annually for compliance with OAC 245:15 Subchapter 11. The professional engineers successfully completed their audit for individuals renewing between July 1, 2006 and June 30, 2007. Because the requirement for providing proof of continuing education for professional engineers has only been in a place a few years, this process has been a learning experience for the Board, staff, and licensees. However, we are happy to report that it appears we have all made significant progress in this area and the audit, while rigorous, was much more successful than in the past.

A few items that were of note by committee members and staff, which may make the process smoother in the future are listed below:

- Certificates of attendance at a seminar must have date of activity, sponsoring organization, title of seminar or course, signed by the authority in charge of course, number of pdh's or contact hours, and the engineer's name.
- Training records from internal company courses must be certified by a company official (supervisor or HR) to be valid.
- Courses must have occurred within the 24 month period of renewal

A special thank you to the professional engineers and Board Members who have served on the Continuing Education Committee for Professional Engineers:

Board Members:

Bill McVey, PE
George Gibson, PE
Glen Smith, PE, PLS

PE Members:

Julie Guy, PE
Shawn Thompson, PE
John Veenstra, PE
Robert Kenworthy, PE
Tommy Lear, PE
Chuck Darr, PE
Steve Almon, PE

Also, a special note of appreciation goes to Sharlette Wisby, Continuing Education Administrator, for her ongoing efforts to serve the public and the Board in the administration of the continuing education requirements for both professional engineers and land surveyors.



License Expirations July 1, 2007 to September 30, 2007

EXPIRATION/REVOICATION - Licenses may be revoked by the Board for non-payment of renewal fees. Licensees will be notified of revocation by certified mail. Typically this notification is mailed 10 days following expiration.

RENEWALS - Each license issued by the Board expires on the last day of the month in which renewal fees are due, and becomes invalid on that date unless paid. One notice of the renewal is sent by first class mail to the address of record in the board files. This in effect provides notice two months prior to revocation.

REINSTATEMENT - Former licensees whose certificates have expired and were revoked for failure to pay renewal fees and desire to reinstate shall make application for reinstatement within 180 days after expiration and pay the prescribed renewal fee and penalty. After 180 days, a new application will be required, which shall be considered specifically by the Board, both from the standpoint of competency and of character.

Professional Engineers:

Abatiell, Larry A.	20437	Bamuffleh, Hisham S.	21541	Board, Mark Anthony	17284	Burgoyne, Richard S.	13624
Abel, L. William	14489	Banks, Ronnie D.	20807	Boatright, Kirk Ewell	9892	Burks, Barry L.	15586
Abington, Arthur J.	10266	Barakat, Hicham	21629	Boland, Alva D.	11950	Burmeister, Allen	13811
Acciarri, Jerry A.	4512	Barker, H. Wayne	18513	Bolden, Ronald L.	15314	Burnett, Clyde H.	20101
Adams, Robert Dean	8758	Barnes, Walter C.	8827	Bolick, Michael D.	9724	Burns, H. Ray	2864
Adams, Robert M.	18854	Barra, Frank J.	9338	Bonifas, Mark J.	22240	Burton, Bruce H.	22264
Adkins, James B.	13581	Barrett, Bradley Scott	13693	Booth, Donald G.	19500	Burton, Gary L.	20527
Aduddell, Wanda S.	14725	Barrett, Bruce Ray	9064	Boulay, Richard B.	19360	Buscaglia, Carl D.	17614
Aikins, J. E.	19914	Barrett, Michael W.	16675	Bowen, Johnny	20139	Bussell, Robert Quirin	3434
Akers, Robin D.	20127	Barsachs, Edwin H.	3483	Brady, Scott L.	16443	Butler, Dan M.	17950
Allen, Marvin Eugene	14802	Bartling, Russell Jr.	17207	Brady, Walter A.	6529	Butt, Aamir Siddiq	21614
Allsup, David W.	12497	Base, Douglas J.	11875	Branch, Gregory A.	16234		
Almquist, Norman G.	15496	Bassett, Bruce C.	15884	Branch, John C.	20847		
Alvine, Steven T.	19375	Battjes, Henry	21005	Brandao, Edgardo P.	21294		
Andary, A. J.	19979	Baur, John C.	14928	Brasel, Robert J.	5398		
Andrews, Edwin D.	2463	Baxter, Kinney R.	15260	Brazell, D. L.	3608		
Angelos, Andy	21989	Bayar, Demirtas C.	13105	Brecher, Mark L.	21489		
Appl, Franklin J.	7892	Beach, Lewis C.	9498	Breipohl, Arthur M.	14513	Bamburg, Malcom L.	137
Applegate, N. Clarke	11308	Beach, Robert G.	9090	Breivik, A. Norris	10716	Bilyeu, Randall J.	1196
Archerd, Paul H.	13466	Beard, Gary J.	13343	Brewer, Kenneth A.	7922	Blackbourn, M. Wayne	1519
Armstrong, Jack A. Jr.	19410	Beard, Harold J.	8848	Britton, Lesley S.	21375	Blake, Graham W.	1451
Arnold, Eugene F.	8213	Beasley, Guy N.	5949	Broad, Jim Charles	10843	Brown, J. E.	760
Arnold, Leonard E. Jr.	21239	Beasley, James Robert	17303	Brooks, Wendell Sr.	8831		
Arrendiell, Robert W.	4122	Beck, Harold Kent	13605	Brosig, David J.	20391		
Artz, Clifford Harold	12045	Beisly, Gary L.	10287	Broussard, E. John	12475		
Ash, Robert E.	18405	Bene', Thomas L. Jr.	10297	Brown, Danny L.	12678	Mesiti-Miller Engrg., Inc	
Ashcraft, Mike L.	19244	Bennett, Carolyn	17583	Brown, Jerry L.	17520	5241/PE	
Asselin, Steven S.	21189	Bennett, Keith L.	14177	Brown, Kenneth D.	21536	Mott Tank Inspection, Inc.	
Auberle, David Alan	11631	Benton, Joseph N. IV	21380	Brown, Martin S.	21270	5251/PE	
Ayers, Curtis III	12140	Berger, Robert	20444	Brown, Samuel J.	14310	Profile Consultants, Inc.	
Azar, Jamal Joseph	7781	Bernard, Robert W.	16410	Brownson, Harry III	20694	5243/PE	
Azcarate, Ricardo J.	20737	Bess, Timothy A.	17724	Brusewitz, Gerald H.	9603		
Baber, Jerry L.	8862	Betts, Stephen C.	15916	Brynac, Michael J.	17953		
Bacher, Charles Anton	10457	Beumer, Richard E.	10332	Buchert, George J.	20274		
Bahr, Hubert A.	10873	Bindra, Charanjit	15826	Bucholtz, Malvin N.	5760		
Balaz, Joseph K.	13378	Birner, Leonard R.	18393	Buell, David J.	19982		
Ball, Barry D.	18646	Blake, Steven Bruce	15657	Bunch, Blaine Alan	19077		
Ball, Harold M.	7317	Blazek, Thomas A.	12522	Burgher, Brian J.	17636		

Professional Land Surveyors:

Bamburg, Malcom L.	137
Bilyeu, Randall J.	1196
Blackbourn, M. Wayne	1519
Blake, Graham W.	1451
Brown, J. E.	760

Certificates of Authorization:

Mesiti-Miller Engrg., Inc	
5241/PE	
Mott Tank Inspection, Inc.	
5251/PE	
Profile Consultants, Inc.	
5243/PE	

Compliance Guidelines - Structural Repair

(cont. from page 2)

prepare a statement to that effect, which must be signed, sealed, and dated per the Board's statutes and rules.

- V. When repairs are found to be necessary by the PE
- A. When (I-A) or (I-B) are applicable, the foundation repair company implements the repair plan submitted to them by the PE in responsible charge of the project.
 - B. When (I-C) is applicable, the PE contacts a foundation repair company, who will implement the repair plan submitted to them by the PE in responsible charge of the project.

VI. Engineering completion letter following implementation of the repair plan

- II. A. When (I-A) is applicable, if an engineering completion letter is requested, the PE may prepare a letter or report that the work was successfully completed by providing a signed and sealed document to that effect **if** the PE was present at the site while the work was performed or **if** a technician working full-time for the PE is present at the site while the work is performed and provides sufficient information to the PE for the PE to prepare, sign and seal such a letter.

A completion letter may be submitted to the client signed by a representative of the foundation repair company if the PE was not present while the work was performed, but the foundation repair company may not represent the letter as an engineering completion letter.

B. If (I-B) If an engineering completion letter is requested, the PE may prepare a letter or report that the work was successfully completed by providing a signed and sealed document to that effect **if** the PE was present at the site while the work was performed or **if** the PE is provided sufficient information by a technician working under the PE's responsible charge, to prepare, sign and seal such a letter.

C. If (I-C) If an engineering completion letter is requested, the PE may prepare a letter or report that the work was successfully completed by providing a signed and sealed document to that effect **only if** the PE was present at the site while the work was performed or if the PE is provided sufficient information by a technician working for the PE under the PE's responsible charge. The PE may **NOT** be provided information by a technician working for the foundation repair company to prepare, sign and seal a completion letter.

A completion letter may be submitted to the client signed by a representative of the foundation repair company if the PE was not present while the work was performed, but the foundation repair company may not represent the letter as an engineering completion letter.

- VII. (I-A) (I-B) and (I-C) The PE is responsible for keeping a complete design file with work or design criteria, calculations and any necessary and appropriate changes made to the work, including but not limited to information regarding why the repairs were necessary and what caused the damage.

If the foundation company overrules the professional judgment of the PE and the property or welfare of the public is endangered, the PE is obligated, per OAC 245:15-9-3(6) to report this matter to the Board for review.



ALONG THE PATH TO COMPLIANCE

Who Signs and Seals Subdivision Plats?

by Bruce Pitts, PLS and Roy Entz, PE, PLS

The Subdivision Plat is a land survey and is required to be signed and sealed by the Professional Land Surveyor who prepared it. That is a requirement not only of the engineering and surveying licensing law, but also the platting statute found in O.S. 11 § 41-104. Since engineers cannot practice land surveying in this state unless they are also licensed land surveyors, they are not authorized to sign such documents. Typically engineers prepare the engineering plans for those subdivisions including street, water, sewer and drainage plans. Land surveyors are not authorized to sign and seal engineering plans. While the engineer may require certain easements and rights of way for the utilities, storm water and streets, the depiction and dedication of these easements is the responsibility of the surveyor.



**Bruce A. Pitts, PLS,
Director of Enforcement**

It has recently been brought to the Board's attention that some authorities within the State are requiring a licensed Professional Engineers (PE) to sign and seal subdivision plats prior to their recording in the office of the County Clerk. This could be a valid request if the PE is required to make statements as to site conditions or other engineering matters that are beyond the responsibility of the Professional Land Surveyor. However, in those instances, the PE must include language on the plat that states specifically what part of the work he or she is taking responsible charge of on the plat. The Board has seen subdivision plats that do not include such language and it is not clear what the PE is responsible for. This may be caused by the authority requiring the PE signature and seal not knowing the state law and rules concerning signing and sealing and responsible charge. The authority requiring such signatures and seals may not know that they placing the PE in jeopardy for signing and sealing a document that is outside of their area of expertise or practicing land surveying without a license.

Title 59 O.S. § 475.15.C.7 of the licensing law states "A licensee shall not seal, sign, date, or allow a seal or signature of a licensee to appear on any work that is not prepared by the licensee or under the direct control and personal supervision of the licensee." The Rules of Procedure in Section 245:15-9-4(2) reiterates this concept and adds that a licensee may not sign and seal a document dealing with subject matter in which they lack competence. Therefore it is very important that before a PE signs and seals a subdivision plat, it must be clearly stated what specific engineering is being addressed. A PE signing a subdivision plat with no such disclosure may be disciplined for signing and sealing work outside of their area of expertise or practicing land surveying without a license.

If you have any questions about this matter or any signing and sealing matter, please contact bruce@pels.state.ok.us or (405) 521-2874 x 22.



Disciplinary Activity of the Board

November 8-9, 2007

In the Matter of Anthony Paul Anderson, PLS 1423, Anthony Paul Anderson, PLS and Anderson Surveying, Inc.; Case No. 2006-060; Through Consent: For offering and practicing land surveying in the state of Oklahoma without a certificate of authorization to do so, Anthony Paul Anderson PLS is found Guilty, ordered to Cease and Desist from the practice of land surveying in the state of Oklahoma until such time as they have been licensed to do so, and assessed an administrative fine of \$500. For offering and practicing land surveying in the state of Oklahoma without a certificate of authorization to do so, Anderson Surveying, Inc. is found Guilty, ordered to Cease and Desist from the practice of land surveying in the state of Oklahoma until such time as they have been licensed to do so, and assessed an administrative fine of \$500. For aiding and assisting Anthony Paul Anderson, PLS and Anderson Surveying, Inc. in the unlicensed practice of land surveying, for failing to achieve minimum standards as required by the Oklahoma Minimum Standards for the Practice of Land Surveying, and for dishonest practice by placing a certificate of authorization number and date of expiration of June 30, 2006 when he knew or should have known Anderson Surveying, Inc. did not have a certificate of authorization, Anthony Paul Anderson is found Guilty, Reprimanded, assessed an administrative fine totaling \$3,000 and agrees to attend a continuing education seminar on the Oklahoma Minimum Standards for the Practice of Land Surveying as sponsored by OSLS.

In the Matter of Stanton Keith Smith, PE 15377 and S & S Engineering, Inc., CA 1694; Case No. 2007-009; Through Consent: For aiding and assisting Stanton Keith Smith in the practice of engineering without a certificate of licensure, gross negligence, preparing and issuing a report that was misleading in its omission of content, misconduct, offering and practicing without a certificate of authorization, S & S Engineering, Inc. is found Guilty, ordered to Cease and Desist from practicing or offering to practice engineering in Oklahoma and assessed an administrative fine of \$3,750. For preparing and issuing a report that was misleading in its omission of content; gross negligence; misconduct; failing to apply his seal and handwritten signature and date the final reports; offering and practicing engineering in the state of Oklahoma with a non-renewed license and by holding himself out as an engineer without being licensed, Stanton Keith Smith is found Guilty, ordered to Cease and Desist from practicing or offering to practice engineering in the state of Oklahoma, and assessed an administrative fine of \$5,750. Further, he is ordered to complete the Intermediate Studies in Engineering Ethics course offered by the College of Engineering at Texas Tech University and obtain a Home Inspectors license from the Oklahoma Department of Health prior to performing further home inspections. The certificate of licensure issued to Stanton Keith Smith is revoked and may be reinstated by this Board only in the manner determined by such Board Action and only after he has obtained a release from the Oklahoma Tax Commission.

In the Matter of Richard D. Laughlin and Daniel W. Greenwood and Midwest Testing, Inc.; Case No. 2007-050; Through Consent: For offering and practicing engineering in the state of Oklahoma on three (3) separate projects without a certificate of authorization to do so, Midwest Testing, Inc. is found Guilty, ordered to Cease and Desist from practicing or offering to practice engineering in the state of Oklahoma until such time as it has been authorized to do so, and assessed an administrative penalty of \$1,500. For offering and practicing engineering in the state of Oklahoma on three (3) separate projects, without a certificate of licensure to do so, Richard D. Laughlin is found Guilty, ordered to Cease and Desist from the practice or offering to practice engineering in the state of Oklahoma until such time as he has been licensed to do so, and assessed an administrative penalty of \$1,500. For offering and practicing engineering in the state of Oklahoma on three (3) separate projects without a certificate of licensure to do so, Daniel W. Greenwood is found Guilty, ordered to Cease and Desist from the practice or offering to practice engineering in the state of Oklahoma until such time as he has been licensed to do so, and assessed an administrative penalty of \$1,500.

In the Matter of Robert G. Boling, PE 9123 and Boling Engineering Consultants, Inc.; Case No. 2007-058; Summary of Findings of Fact and Order: For offering and practicing engineering in the state of Oklahoma on five (5) separate projects without a certificate of authorization to do

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Disciplinary Activity of the Board (cont.)

so, Boling Engineering Consultants, Inc. is found Guilty and assessed an administrative fine of \$2,500. For aiding and assisting Boling Engineering Consultants, Inc. in the unlicensed practice of engineering; signing and sealing engineering plans with his Oklahoma PE 9123 seal not prepared by him or under his direct control and personal supervision; providing false testimony or information to the Board Investigator and falsely certifying on his form for Renewal of licensure that he had not been disciplined by another licensing board when in fact he had; undertaking projects when he was not qualified by education or experience in mechanical and plumbing engineering and signing and sealing documents dealing with subject matter in which he lacked competence -Robert G. Boling is found Guilty and his PE license is suspended for a period of five (5) years. Robert G. Boling may apply for reinstatement at the end of the five (5) years provided he demonstrates, at a minimum, completion of five (5) college credit hours of ethics, compliance with all Board rules and statutes during suspension period and shall not be allowed to practice mechanical engineering in Oklahoma until he has passed the Principles and Practice Exam for Professional Engineers in Mechanical Engineering.

In the Matter of Michael A. Stone, PE 22856 and Teng & Associates, Inc., CA 5254; Case No. 2007-065; Through Consent: For offering and practicing engineering in the state of Oklahoma without a certificate of authorization to do so, Teng & Associates, Inc., is found Guilty, Reprimanded, and assessed an administrative penalty in the amount of \$500. For offering and practicing engineering in the state of Oklahoma without a certificate of licensure to do so, Michael A. Stone is found Guilty, Reprimanded and assessed an administrative fine in the amount of \$500.

In the Matter of Lynn B. Calton, PLS 1026; Case No. 2007-068; Summary of Findings of Fact and Agreement: For violating laws or rules of another state (MO) that are the same or substantially equivalent to violations of Oklahoma laws and rules, Lynn B. Calton has surrendered his certificate of licensure, PLS 1026 to practice land surveying in the state of Oklahoma in lieu of administrative action. Lynn B. Calton will be permanently barred from re-issuance of licensure as a professional land surveyor in Oklahoma.

In the Matter of Robert L. Plowfield, Jr., PE 18010; Case No. 2007-069; Through Consent: For violating laws or rules of another state (FL) that are the same or substantially equivalent to violations of Oklahoma laws and rules, Robert L. Plowfield, Jr. is found Guilty and Suspended from the practice of engineering in Oklahoma until such time as he has completed all terms of the Final Order issued by the Florida Board of Professional Engineers, regarding Florida Case No. 02-0168.

In the Matter Roy L. Aach, PE 9519; Case No. 2007-070; Through Consent: For violating laws or rules of another state (FL) that are the same or substantially equivalent to violations of Oklahoma laws and rules, Roy L. Aach is found Guilty and Suspended from the practice of engineering in Oklahoma until such time as he has completed all terms of the Final Order issued by the Florida Board of Professional Engineers, regarding Florida Case No. 2005014569.

In the Matter of D. Mike Dossey, PLS 1431 and Cimarron Surveying & Mapping Co., CA 1780; Case No. 2007-071; Through Consent: For issuing a survey that did not meet the Oklahoma Minimum Standards, Cimarron Surveying & Mapping Co. is found Guilty, Reprimanded and assessed an administrative fine of \$500. For failing to achieve minimum standards as required by the Oklahoma Minimum Standards for the Practice of Land Surveying, D. Mike Dossey is found Guilty, Reprimanded and assessed an administrative fine of \$500.

In the Matter of Donald E. Flynn, PE 18782; Case No. 2007-072; Through Consent: For violating laws or rules of another state (FL) that are the same or substantially equivalent to violations of Oklahoma laws and rules, Donald F. Flynn is found Guilty and Suspended from the practice of engineering in Oklahoma until such time as he has completed all terms of the Final Order issued by the Florida Board of Professional Engineers, regarding Florida Case No. 2004012640.

In the Matter of Timothy C. Geary, PE 18049 and Geary Engineering, P.A., CA 5286; Case No. 2007-75; Through Consent: For offering and practicing engineering in the state of Oklahoma without a certificate of authorization to do so, Geary Engineering, P.A. is found Guilty, Reprimanded and assessed an administrative fine of \$500. For aiding and assisting Geary Engineering, P.A. in the unlicensed practice of engineering, Timothy C. Geary is found Guilty, Reprimanded and assessed an administrative fine of \$500.

Residential Foundation Public Meeting Held

A public meeting was held in July to discuss the problem of some residential foundations being designed that do not meet code.

A summary of the meeting written by Robert C. Zahl, P.E., is outlined below.

Robert C. Zahl, P.E., Board Member and Structural Engineer gave a short historical background of why we were meeting on this subject with members of the profession and with various members of the public, including builders, homeowners, attorneys, city building officials, and others.



**Robert C. Zahl, P.E.
Board Member**

The main purpose of the meeting was to talk about one specific residential foundation system that is being used by many local builders, even though it does not meet the minimum criteria of the local residential building codes, from both a minimum depth standpoint and from a structural strength standpoint. Mr. Zahl pointed out that engineering firms who were simply sealing the details that depict this system, without actually designing the foundation system represented by the detail, were violating the statutes governing the practice of engineering. Mr. Zahl also pointed out that this meeting should be considered the “amnesty meeting” for this practice. Firms or individuals who continue to do this in the future will be brought before the Board and will be required to justify their actions.

The foundation system described by Mr. Zahl is known as a “pier and grade” system, which is not quite a real “pier and grade beam” system, because it is not properly designed to actually function as a pier and grade beam system. In a true pier and grade beam system, the gravity loads associated with the exterior walls are all designed to be carried by the grade beams which span between the piers. The piers are designed to transfer these gravity loads, as well as any lateral loads that are taken by the exterior walls, into the piers, which are usually poured-in-place concrete members. The piers are supposed to transfer these loads into the ground, through a combination of allowable end bearing and skin friction values. This is how it is supposed to work.

However, the systems being used by many of the builders in this area, who are utilizing the “pier and grade” foundation system, are not constructing a foundation that even comes close to meeting these criteria. The unacceptable system is one which has “grade beams” that are usually formed and poured right on top of the existing grade or on the building pad that has been created by fill dirt being dumped on the site and spread out in the area where the house will be. These “grade beams” are usually 8” to 10” wide and anywhere from 14” to 18” in the vertical dimension. The piers are normally 8” to 10” round concrete members that are created by a power auger on the back of a tractor or front-end loader. They are usually no more than 36” deep, because the auger on the tractor cannot get much deeper than this. They are typically spaced 6’ to 8’ apart.

Mr. Zahl stated that he had taken a standard example of one of these foundation systems and had back-calculated what it would actually carry, in terms of a standard brick veneer wall, if one ignored all of the other loads on the grade beam system. Using 10” diameter piers, spaced at

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Residential Foundations (cont.)

7' on-center, and assuming that the allowable soil bearing value was 3000 psf, these piers would only carry a 5'-10" brick veneer wall. This is without any of the roof live and dead loads and without the weight of the wall framing and grade beam itself. This system just does not work, at least not as shown on the typical details that are being passed around between a handful of engineers.

The secondary affect that this non-compliant foundation system has on the overall quality of the house, which this system is supposed to be supporting, is that it readily allows water to get under the foundation system and under the slab-on-grade. This is due to the fact that the bottoms of these grade beams are usually anywhere from 1" to 8" below the finish grade. The residential building codes require the bottom of the grade beam to be below the typical frost depth in the area, unless perimeter insulation is being used. The frost depth in the Oklahoma City area, according to the Federal Housing Administration, is approximately 18" below finish grade, and the systems that are typically being used do not include perimeter insulation, which is the other reason that these systems are non-compliant with the codes.

There was an engineer in the audience who spoke up for one of the larger local builders, saying that this builder uses 12" diameter piers, typically, and 16" piers in some instances. He also said that they use perimeter insulation, which did not seem to agree with input received from some of the other engineers that typically do foundation investigations. This engineer also stated that he was of the opinion that these piers "worked" because of the allowable skin friction values that he includes in his allowable pier load calculations. At that point, Mr. Zahl asked how many geotechnical engineers were in the audience, to which there was a show of hands, indicating about a dozen. Mr. Zahl asked how many of them would actually recommend using allowable skin friction values for piers that were 30" to 36" long, and there were no hands raised.

There were a group of questions asked, by different people at various times during this meeting, that were all wanting to know whether the Engineering Board was attempting to ban the use of a pier and grade beam foundation system. At some point in the proceeding, Mr. Zahl addressed this topic directly. The answer was, "No, the Board is not trying to ban the use of a properly-designed and code-compliant pier and grade beam foundation system." What the Board is trying to put to a halt to is the indiscriminate approval of a non-compliant system by engineers who are licensed by this Board and who are providing PE seals on un-designed, non-compliant foundation systems. Mr. Zahl stated that there is absolutely nothing wrong with using a properly-designed pier and grade beam system.

After much discussion, involving several testimonials of specific foundation systems that various engineers have seen or have used, along with input and questions from several other people in the audience, Mr. McVey thanked everyone for taking the time to attend and getting involved. He then closed the discussion and ended the meeting.



NCEES Seeking Volunteers for Civil Engineering PE Exam Standard-Setting Study

On May 16-17, 2008, NCEES will conduct an important study related to the Civil Engineering PE examination. It will be a standard-setting study conducted to establish the passing score for the civil examination.

NCEES is seeking more than 75 licensed civil engineers to be involved in the study. The panel must be diverse in terms of geographic locale, age, gender, ethnicity, and area of practice (academia, government, industry, private practice, etc.). The panel must be composed of recently licensed engineers as well as licensed engineers who supervise or manage recently licensed engineers.

NCEES surveyed both academicians and practicing civil engineers in 2005 to determine the topics newly licensed civil engineers should know to be licensed. The results of the survey were used to establish a new specification (topics covered) for the Civil PE examination. The new specification includes a construction engineering module. Also as a result of the survey, water resources and environmental modules have been combined since there was substantial overlap between the environmental and water resources knowledge.

Each time an examination undergoes a specification change, NCEES conducts a standard-setting study to set a passing score for the examination. Participants will develop a standard for minimal technical competency and then actually work the exam and rate the difficulty of each question. Panelists will be asked to devote two days to the study. Travel and lodging expenses will be paid by NCEES in accordance with the NCEES travel policy.

Please contact NCEES by February 29, 2008, if you would like to participate in the study or if you would like to recommend someone to participate. For more information, contact NCEES Exam Development Engineer Susan Cline, P.E., at NCEES by calling 800-250-3196, ext. 479, or via e-mail at scline@ncees.org.



IMPORTANT REMINDER TO PROTECT YOUR PROFESSIONAL LICENSE!

Oklahoma law requires that all individuals holding a professional license must be in compliance with the Oklahoma Tax Commission prior to renewing their license. Therefore, no professional engineer or professional land surveyor's license will be renewed once this office receives notification from the Oklahoma Tax Commission that a licensee is in non-compliance. At that point it becomes a matter between the Oklahoma Tax Commission and the licensee.

It has been our experience that it can be a timely process to be cleared by the Oklahoma Tax Commission once you have been listed as being in non-compliance, so please make sure that you give yourself ample opportunity to resolve any outstanding issues with the Oklahoma Tax Commission prior to your license renewal date.

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